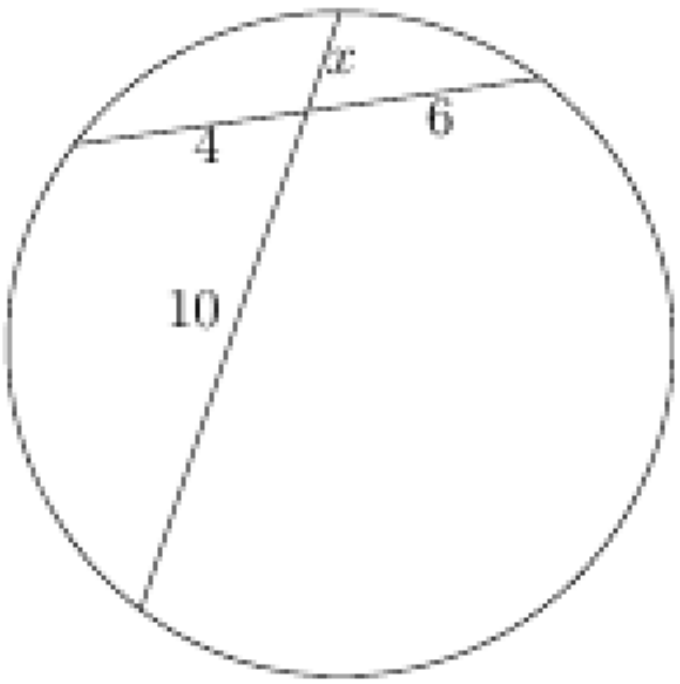
Topic: Intersecting chords

Question: Find the value.

Using the given chords in the circle, find the value of x. The figure may not be drawn to scale.



Answer choices:

A 2.4

B 4.6

C 5

D 6

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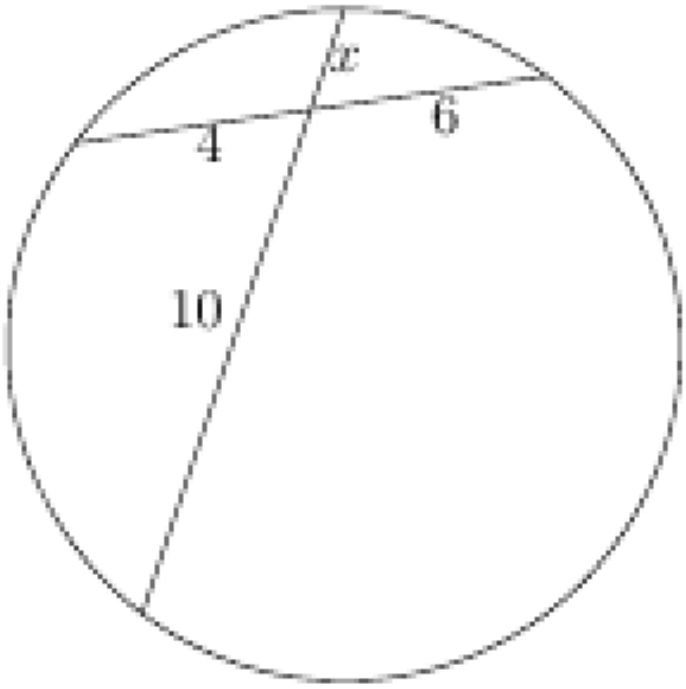
Solution: A

The products of the chord segments are equal.



$$10 \cdot x = 4 \cdot 6$$

$$10x = 24$$

$$x = 2.4$$

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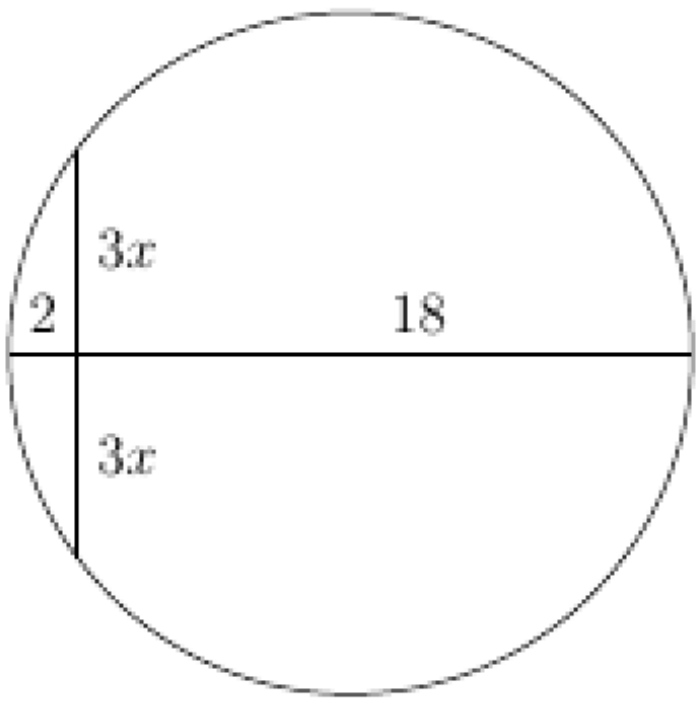

Answer choices:

A 2

B 3

C 4

D 5

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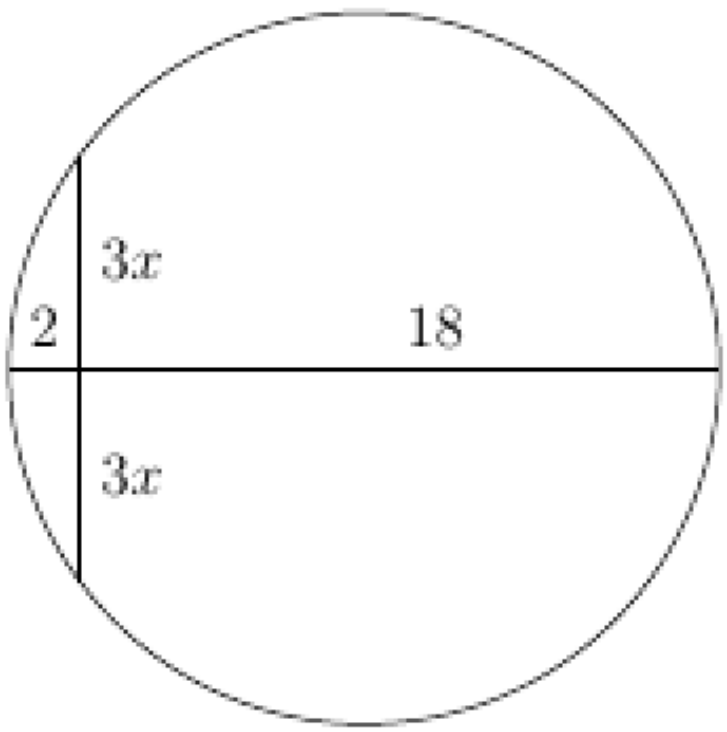
Solution: A

The products of the chord segments are equal.



$$3x \cdot 3x = 2 \cdot 18$$

$$9x^2 = 36$$

$$x^2 = 4$$

$$x = 2$$

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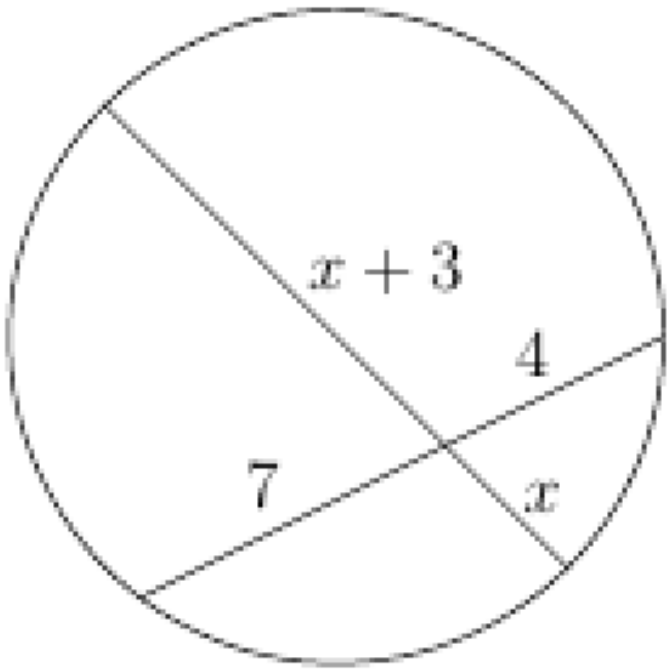

Answer choices:

A 1

B 2

C 3

D 4

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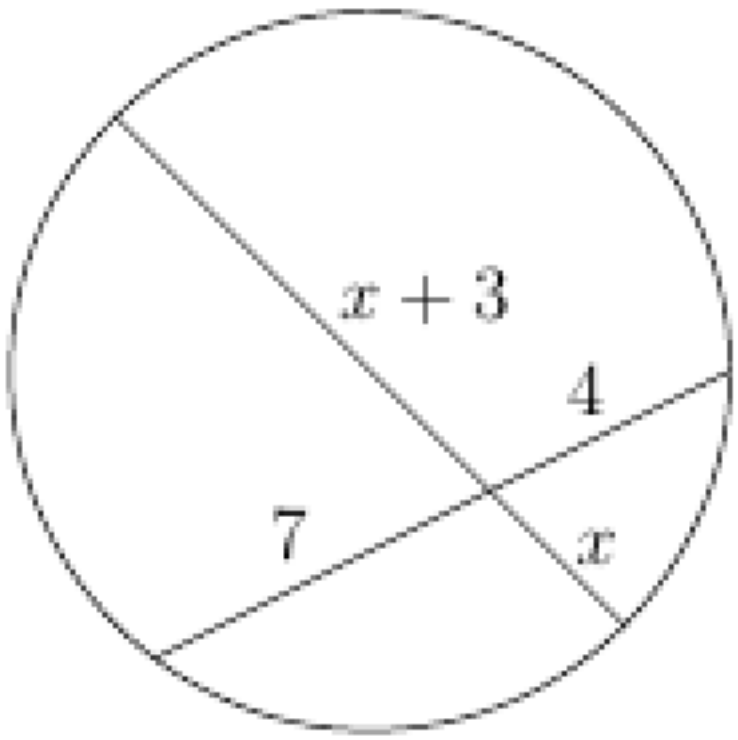
Solution: D

The products of the chord segments are equal.



$$x(x+3) = 4 \cdot 7$$

$$x^2 + 3x = 28$$

$$x^2 + 3x - 28 = 0$$

$$(x+7)(x-4) = 0$$

$$x + 7 = 0 \text{ or } x - 4 = 0$$

$$x = -7 \text{ or } x = 4$$

Rule out the negative value.

$$x = 4$$

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